THREE NEW LYCAENID BUTTERFLIES FROM THE SOUTH WESTERN CAPE PROVINCE

By C. G. C. DICKSON, M.Sc.*

(*Concluded from Vol. 94 page 224*)

A new *Crudaria* Wallengren.

A species with a small male with a noticeably dark upperside was found by Mr. C. W. Wykeham when it was flying amongst, though much scarcer than, *Crudaria* ? *leroma* Wallengren (probably not the nominate form of this insect, though considered in the meantime to be, perhaps, conspecific with it), at Fraserburg in the Great Karroo of the Western Cape Province, on 5th January, 1982. On a later visit, on 12th February, Mr. Wykeham only succeeded in securing a female of the first named butterfly, although *C. leroma* (or the above taxon which is at least allied to it), was encountered in fair numbers. Even the latter species was decidedly localised. A description of the newly discovered insect follows hereunder.

Crudaria wykehami spec. nov.

The forewings of the male are rounded distally, almost as in the female, and the ground-colour of the upperside is, in the male, fairly deep fuscous-brown.

Male (Upperside).

All wings with a slight bronzy sheen in certain lights; and edged marginally with blackish-brown. Veining as a whole more darkly scaled than the main wing-surface. Forewing with an ill-defined, dark discocellular marking; hindwing with a small, short and blunt, anal-angular projection, and with a minute light grey spot with some slight, dark adjoining scaling more or less within the projection. There is only a very slight indication of what might be regarded as a tail at the anal-angle – in contrast to the situation pertaining in *C. leroma*. Cilia of all wings light cream-coloured, with some dark intrusion in places; mainly dark at the anal-angle.

LEGEND TO PLATE I

Lepidochrysops pringlei spec. nov.: fig. 1. ♂ holotype (upperside); fig. 7 ♂ holotype (underside). *Crudaria wykehami* spec. nov.: fig. 2. ♂ holotype (upperside); fig. 3. ♀ allotype (upperside); fig. 8. ♂ holotype (underside); fig. 9. ♀ allotype (underside). *Aloeides carolynnae* spec. nov.: fig. 4. ♂ holotype (upperside); fig. 5. ♀ allotype (upperside); fig. 10. ♂ holotype (underside); fig. 11. ♀ allotype (underside). *Lepidochrysops* sp. (description awaiting publication): fig. 6. ♂ (upperside); fig. 12 ♂ (underside). Hab. – Kammanassie Mtns., S. W. Cape Province, 3.ii.1979 (Dr. J. B. Ball).

Figures slightly below natural size. Note: In figs. 4 & 5 the ground-colour is represented as a little more reddish than in nature. (Colour reproduction by Unifoto (Pty.), Ltd., Cape Town.)

* "Blencathra", Cambridge Avenue, St Michael's Estate, Cape Town.

Underside.

Forewing. Ground-colour light fawny-grey. Basic pattern of partly metallic, incompletely black-bordered spots, that of *leroma*, the discal series being, as a whole, parallel with the distal margin and definitely not obliquely placed as in at least some forms of *leroma*, including the Fraserburg one. In one paratype the four lower discal spots are not, or are only very incompletely, black-bordered inwardly. A grey or rather blackish "smudge" occurs in the lower part of the wing, towards the base. Some small metallic markings with more or less apparent slight, dark scaling, and including ones which follow the discal series and are referred to again below, are but poorly defined. There is a submarginal series of not sharply defined, fair sized pale markings some of which tend to be slightly metallic inwardly, and with a little indistinct dark marking, contiguous with them. Faint darkish dots occur on the outer side of this series, and the wing-margin has a brownish edging, with very fine black scaling on the ends of the veins adjoining it.

Hindwing. Ground-colour as described for forewing, or of a somewhat warmer fawn tone (at least in one specimen). The light, creamy to light fawn, spotting corresponding to that of *leroma*, and similarly disposed. This spotting shows, at the most, only a partial indication of fine, darker (brownish) edging. There is a fine brownish edging to the wing-margin, less distinct than in the forewing, with fine darker dots adjoining it.

Cilia of all wings mainly whitish-grey to light fawn-coloured, with some individual variation in different specimens.

Length of forewing: 11.25 – 11.5 mm. (the former measurement, in holotype).

Female (Upperside).

Brown, with a more chestnut tone and lighter than in the male; darkening a little towards the distal margins. There may be a slight indication of a discocellular marking in all wings. Margins with a less distinct dark edging than in the male. Anal-angular projection of hindwing broad – and fairly well produced but without a clear-cut tail as such. There is a minute whitish dot at the anal-angle of the wing.

Cilia of all wings white to creamy-white but dark towards their bases, with a little light colour intervening close to the wing-margins, to some degree; those of anal-angular projection chiefly dark.

Underside.

Forewing. Ground-colour rather light fawn, with a warmer tone than that of the male. Pattern of white spotting as in the male but, in most examples, all the spots contrast very clearly with their background; those in the inner-half of the wing only have narrow black edging on each side, while, in the discal series, black bordering occurs only on the outer side. The submarginal series clear and decidedly better defined than in the male. Not sharply defined dots darker than the ground-colour which occur submarginally are at least partly bordered with some whitish scaling which, outwardly, merges into the cilia; and there is a little darker marking at the vein-ends, corresponding to the submarginal dots of the male. Some extensive whitish scaling occurs near the lower angle of the wing. The main portion of the discal series lies at about the same angle as in the male, not being obliquely placed *in relation to the distal margin.*

Hindwing. Ground-colour, as a whole, is sometimes more light greyish than in the forewing. Basic pattern as in the male, but the spotting is distinctly white and, at least partly, more prominent; the degree of dark edging distinctly variable in different specimens but in none seen as yet really heavy. Submarginal dots mostly well encircled with white; and some dark marking at vein-ends. In area 5, the white marking of the postdiscal series is obscured (or at least partly so) by brownish marking, mainly in the form of an ellipse.

Cilia of all wings white but (especially in forewing), more basally, dark brown; and with an impression of chequering inwardly. Noticeably darkened below lower angle of forewing and the anal-angle of hindwing.

Length of forewing: 14.25 – 14.5mm. (the latter measurement, in allotype).

The body and ancillary parts are, in both sexes, close to those of *leroma*.

♂ Holotype, WESTERN CAPE PROVINCE: Fraserburg,

5.1.1982 (C. W. Wykeham); British Museum Reg. No. Rh. 18705.

♀ Allotype, W. CAPE PROVINCE: data as for holotype, 12.11.1982 (C. W. Wykeham); British Museum Reg. No. Rh. 18706.

Paratype in Coll. C. W. Wykeham: as holotype, 5.1.1982, one ♂ (C. W. W.).

Another female specimen, captured on 5th January, is in too poor condition for inclusion as a paratype, although the basic marking of the underside is reasonably clear.

This insect appears, in fact, to be less closely related to *Crudaria leroma* than to a member of the group included in a paper of Van Son's, published in *Ann. Transv. Mus.* 22 (4): 503-9 (1956), this also being supported by the male genitalia. As far as can be gathered from a comparison of the genitalia of the present insect with Van Son's description and figure of those of the other taxon, there appear, however, to be several differences, as noted hereunder.

The concavity between the *uncus lobes* appears to be deeper in the present species. The *vinculum* is completely fused ventrally and laterally and not composed of two distinct sclerites as in *leroma* itself (but is as is indicated by Van Son, for the other species). The *valve* has the distal end longer and more acute. *Aedeagus* partly very deep, in the lateral view, owing to the ventral portion being produced downwards at about two-fifths of the distance from basal end of aedeagus. *Juxta* larger, broader and more acutely extended outwardly, with respect to each half.

Mr. Wykeham has furnished the following note on the discovery of the butterfly concerned:– "Early in January, 1982, whilst on a visit to the Teekloof Pass near Fraserburg, with Mark Anderson, I came across *Crudaria* flying in open patches amongst "Mimosa" (*Acacia karroo* Heyne) trees just before dusk. Again, we found them flying not long after the sun had risen on the following day. During the warm portion of the day they were not very active. The specimens tended to settle on low plants or on the ground.

"It was apparent at the time that more than one species was flying, but it was only due to the knowledge and experience of my uncle, Charles Dickson, that the distinction between the other *Crudaria* and this species was clearly ascertained."

It has been a pleasure to name this interesting little Lycaenid after Mr. C. W. Wykeham – with his fine field work over the years particularly in mind, and which has helped to add so much to our knowledge of South African butterflies.

A new *Aloeides* Hübner.

Three males and a female of the present insect were first found by Dr. Jonathan B. Ball on a mountain slope near Goudini, some 12 miles west of Worcester, C.P., on 1st March, 1980. From these specimens, some resemblance on both surfaces to *Aloeides lutescens* Tite & Dickson (1968) was noticed – this taxon having been described in *Bull. Br. Mus. Nat. Hist.* (Ent.) 21, No. 7: 385, Pl. 4, figs. 67, 68, 79, 80, with the type-specimens from Brand Vlei, at a point about 4 miles south of Worcester. A good series of later

specimens secured on 15th November and 3rd December, 1980, indicated that there was a greater difference between the above two taxa than had been appreciated initially and it was believed that this would justify specific status being accorded to the recently discovered butterfly. The two habitats concerned are of noticeably different types, *Aloeides lutescens* occurring on low-lying sandy ground at Brand Vlei and the other insect on rough mountainous terrain, in its own locality.

Aloeides **carolynnae** spec. nov.

Male (Upperside).

Forewing. In comparison with those of *Al. lutescens* the black or blackish costal and distal-marginal borders are broader and the costal area from wing-base to the commencement of the costal border tends to be of a darker tone than the adjoining orange or orange-red ground-colour of the wing; while more apparent darkening of the veining for some distance based of the distal-marginal border occurs in the present taxon (such darkening being absent, or almost so, in most examples of *lutescens*). Cilia usually darker as a whole than in *lutescens*, but with individual variation in this respect.

Hindwing. The feature with respect to the partial darkening of the veining may apply to this wing also, but less frequently than in the forewing. The black patch adjoining the upper portion of the margin is normally much broader and longer than in *lutescens*, sometimes even extending down to vein 4; and the dark border below this patch is also wider than in this taxon. Cilia generally darker as a whole than in *lutescens*.

Underside.

Forewing. Orange-red area deeper than in *lutescens* but with the main spotting similar if inclined to be more prominent and this being so, frequently, with regard to the lowest component of the black sub-marginal marking. The narrow costal border, broad apical area and narrow distal border are, in individual specimens, brown, reddish-brown or, in some examples, practically lake-coloured; these portions being darker than in any specimens of *lutescens* seen as yet from this butterfly's type-locality. However, the costal border adjoining the orange-red area is usually narrower than in *lutescens*. The continuation of the submarginal series in the apical region – in the form of darker, inwardly lighter edged marking – is not apparent in some specimens but may be visible in others.

Hindwing. The ground-colour is the same, in individual specimens, as that of the apical or subapical region of the forewing. The marking is of the basic pattern of the *Al. thyra* (L.) group: whitish-grey and partly outwardly dark-edged – especially most of the main discal series – but not, or barely, edged thus in a very small minority of specimens. The pattern as a whole can be traced fairly precisely if generally less distinctly as regards its lighter components, in *lutescens* itself, but the configuration of some of the dark marking, or edging, in the lower portion of the wing is rather different in *lutescens*. Except in one specimen which has been seen, in which it has occurred in a decidedly reduced form, the light postdistal patch of *lutescens*, with its centre in area 4, has not been present in examples of the present insect which have been examined.

Length of forewing: 13.5 – 15.5mm. (15.25mm., in holotype). One abnormally small specimen has a measurement of only 11.25mm.

Female (Upperside).

The distal margin of the forewing is well rounded as is usual in females of this group.

Forewing. There is generally less prominent darker suffusion at base of wing than in the male though, as in this sex, with the marking usually more apparent than in *lutescens* (it is very obscure in the allotype of *carolynnae*). The dark borders wide, as in male.

Hindwing. Darker basal suffusion in this wing as referred to under forewing. Upper dark patch adjoining margin large, as in the male; the following dark border more crenulate than in male, as is the case with *lutescens*. Cilia in all wings as in the male.

Underside.

Forewing. Similar to that of male. The light inner-marginal colouring continues upwards on the distal side of the submarginal dark marking in area 1b. The much reduced continuation of the submarginal marking towards the apex is usually more in evidence than in the male.

Hindwing. As in male, but with the marking tending on the whole to be less clear-cut. In females with the lighter form of ground-colour a greater resemblance to *lutescens* is apparent in the marking itself, this applying particularly to one paratype in which all the lighter marking is outlined with dark scaling. A light postdiscal patch of the type referred to under the male has definitely been present in a small minority of the females which have been examined.

Length of forewing: 13.0 – 16.25mm. (15.5mm., in allotype).

In both sexes the head bears largely vinous hairs, mixed with darker ones, with the eyes narrowly, if though not always completely, encircled with white scaling. The dark thorax bears ochreous to orange-brown hairs and appendages above (more greyish in some specimens) and is largely greyish (or the actual scaling, white), beneath – also the legs; abdomen with the hairs or scales above and scaling below, much as in the case of the thorax, and with some intermittent whitish scaling laterally. Palpi with the first joint brownish; remaining portion mainly white, but dorsally brownish, as well as part of the outer portion for a good distance from its commencement. Under considerable magnification the darker portions of the palpi are seen to consist chiefly of dull orange and black scaling (the proportion varying in individual specimens), and there is sometimes a slight inclusion of vinous scaling. The first joint is slightly white – scaled near the tip and is partly white, inwardly, along its length. Antennae dark brown to blackish, with partial silvery-white scaling beneath and on sides, and the lower-inner portion of the club deep orange or orange-brown.

♂ Holotype, SOUTH WESTERN CAPE PROVINCE: Near Goudini, 15.XI.1980 (Dr. J. B. Ball).

♀ Allotype, S. W. CAPE PROVINCE: data as for holotype, 3.XII.1980 (Dr. J. B. Ball). Dr. Ball has wished to present the holotype and allotype to the Transvaal Museum.

Paratypes in Coll. Dr. J. B. Ball: data as for holotype, 1.III.1980, four ♂♂ , one ♀; 15.XI.1980, nine ♂♂, one ♀; 3.XII.1980, four ♂♂, three ♀♀ (J.B.B.). (Three of these paratypes will be presented by Dr. Ball to the Transvaal Museum).

Paratypes in Coll. British Museum (Nat. Hist.): SOUTH WESTERN CAPE PROVINCE: Near Goudini, 15.XI.1980, one ♂; 3.XII.1980, one ♀ (Dr. J. B. Ball); British Museum Reg. Nos. Rh. 18708 and Rh. 18707 respectively.

Paratypes in author's collection: as holotype, 3.XII.1980, one ♂ ; 15.XI.1980, one ♀ (J. B. B.).

Paratypes in Coll. W. H. Henning: as holotype, 15.XI.1980, one ♂, one ♀ ; 3.XI.1980, two ♂♂ (J. B. B.).

The distinctness and degree of development of the marking of the hindwing underside can vary considerably, in this butterfly, if fairly constant in most specimens. This applies especially to the females. Although *Al. lutescens* has been used, in the description, as a convenient basis of comparison, it is fully realised that there are other taxa of the *Al. thyra* group which show close affinity to *Al. carolynnae* – including one from the Knysna area.

Dr. Ball has made the following comments with respect to his field experience of specimens of the present insect:– "They were all found on the slopes of the Slanghoek Valley near Goudini; and were in association with *Al. thyra* (L.) – which occurs also at con-

siderably higher (and lower) altitudes. They were found only at three localised locations, ± 650 ft. above the valley "floor".

"General over this area, was Cape "fynbos" vegetation, with open rocky spaces. Three species of *Aspalathus* (Papilionoideae) were found in the area and females of both *Al. thyra* and *Al. carolynnae* were found on it though none were seen ovipositing. The habits are very similar to those of the butterfly's congenors: short swift flights, and often returning to a preferred spot on a rocky area or settling on vegetation."

This interesting addition to the very large genus *Aloeides* has been named with much pleasure after Mrs. Carolynn Ball.

The author wishes to take this opportunity to correct the following misprints which occurred in his earlier article in Vol. 94, Nos. 3-4, of this journal:— P. 43, in line 19 from top of page, "K. M." should read "H. N."; P. 44, in line 20 from bottom of page, "Wykenham" should read "Wykeham".

PRECIS OCTAVIA CRAM. (LEP.: NYMPHALIDAE): EMERGENCE OF WET AND DRY SEASON FORMS FROM COLLECTED LARVAE. — In February, 1956, I collected seven attractive Nymphalid caterpillars from *Coleus* plants in a front garden at Eshowe, Natal. They were taken down to the warmer climate of Maidstone on the coastal plain north of Durban, and kept in three glass topped metal tins 3" by 1¾", and fed on *Coleus*. All had pupated within ten days, and at the time of collection were somewhat less than half grown, and did not vary much in size. Butterflies emerged on the 4th, 8th, 10th(2), 12th and 14th(2) March, five being of the orange wet season form like their parents, but two which emerged on 12th and 14th March were of the blue dry season form *sesamus* Trim.

The seven larvae may have originated from one or more females, but the larvae for much of their lives, and the pupae, were kept under identical conditions. D. Swanepoel in his *Butterflies of South Africa* gives September to March as the flight period of the wet season form, and states that f. *sesamus* appears about March/April; regarding the former there is a succession of broods. It appears that of the seven larvae two were destined genetically to produce f. *sesamus*; could they have originated from the same female, i.e. at this time of seasonal change may a female lay eggs to produce a proportion of both forms? Or is it more likely that the two forms were from different females respectively, each producing a homogeneous brood? L. McLeod, *Ent. Rec.* **92**, states that his experimental work with this species has shown that temperature alone, not humidity, is the primary factor in determining seasonal form. The experience with breeding *P. octavia* related above seems to be worth reporting.

Regarding seasonal variation of *Precis* species in Natal, I note that at Entumeni on the coastal plain on April 15th 1956, the wet season form of *P. octavia* was still flying and in excellent condition; whereas on May 5th, only the dry season form *sesamus* was in evidence, although *P. archesia* was present and fresh only in its wet season form. — B. K. WEST, 36 Briar Road, Bexley.